



Day : Thursday
Date: 8/11/2005

Time: 14:14:13

Inventor Name Search

Enter the **first few letters** of the Inventor's Last Name.
Additionally, enter the **first few letters** of the Inventor's First name.

Last Name

First Name

punnonen

j

Search

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Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	18765	punnonen.in. or wright.in. or semyonov.in. or maxygem.as.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:51
L2	15826	CMv near4 promoter	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:53
L3	24	L1 and L2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:55
L4	15	L3 and "entire length"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:51
L5	3861	DNA near3 shuffl\$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/11 13:52
L6	1298	I2 and I5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/11 13:52
L7	2	(CMv near4 promoter)SAME I5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:55
L8	1	I3 and shuffle	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:55
L9	37756	(536/23.1 536/24.1 435/320.1 . ccls.)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:56
L10	62	I9 and I1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:56
L11	11	I10 and CMv	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:56
L12	7826	I9 and I2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:56

L13	1128	I2 SAME (chimera or chimeric or mutagenized or shuffle or shuffling or altered or mutated)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:58
L14	3	I13 and "increased promoter activity"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:58
L15	7	I13 and I1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/11 13:58

	Document ID	Title
1	US 20040142331 A1	Molecules for disease detection and treatment
2	US 20040110295 A1	Nucleic acid vectors
3	US 20040048253 A1	Molecules for diagnostics and therapeutics
4	US 20040014087 A1	Molecules for diagnostics and therapeutics
5	US 20040009469 A1	Novel flavivirus antigens
6	US 20030190697 A1	Novel co-stimulatory molecules
7	US 20030166008 A1	Nucleic acid encoding a G-protein-coupled receptor, and uses thereof
8	US 20030138881 A1	Novel co-stimulatory molecules
9	US 20030124569 A1	Secretory molecules
10	US 20010006950 A1	GENETIC VACCINE VECTOR ENGINEERING
11	US 5665357 A	Antibodies recognizing tumor associated antigen CA 55.1

	Document ID	Title
1	US 20040171573 A1	Rationally designed and chemically synthesized promoter for genetic vaccine and gene therapy
2	US 5693508 A	Retroviral expression vectors containing MoMLV/CMV-IE/HIV-TAR chimeric long terminal repeats
3	US 5115096 A	Amphiregulin: a bifunctional growth modulating glycoprotein

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 14:00:38 ON 11 AUG 2005

L1 77575 S PUNNONEN?/AU OR SEMYONOV?/AU OR WRIGHT?/AU
L2 3020 S CMV (3W) PROMOTER
L3 5 S DNA (2W) SHUFFLE
L4 113 S (CHIMERIC OR CHIMERA) (P) L2
L5 2 S L4 AND L1
L6 2 DUP REM L5 (0 DUPLICATES REMOVED)
L7 0 S L2 AND L3
L8 3 DUP REM L3 (2 DUPLICATES REMOVED)
L9 0 S L8 AND L1
L10 640 S DNA (2W) SHUFFL?
L11 1 S L10 AND L2
L12 102 S (MUTATED OR MUTATION OR MUTAGENIZED OR ALTERED OR CHIMERIC OR
L13 68 S L12 NOT PY>=2001
L14 26 DUP REM L13 (42 DUPLICATES REMOVED)
L15 1 S L14 AND "PROMOTER ACTIVITY"

L15 ANSWER 1 OF 1 MEDLINE on STN
 ACCESSION NUMBER: 2000105625 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 10637452
 TITLE: Increased level and duration of expression in muscle by co-expression of a transactivator using plasmid systems.
 AUTHOR: Li S; MacLaughlin F C; Fewell J G; Li Y; Mehta V; French M F; Nordstrom J L; Coleman M; Belagali N S; Schwartz R J; Smith L C
 CORPORATE SOURCE: Otolaryngology-Head and Neck Surgery, UAMS, Little Rock, AR, USA.
 SOURCE: Gene therapy, (1999 Dec) 6 (12) 2005-11.
 Journal code: 9421525. ISSN: 0969-7128.
 PUB. COUNTRY: ENGLAND: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200002
 ENTRY DATE: Entered STN: 20000309
 Last Updated on STN: 20000309
 Entered Medline: 20000224

AB Skeletal muscle is an attractive target for gene therapies to treat either local or systemic disorders, as well as for genetic vaccination. An ideal expression system for skeletal muscle would be characterized by high level, extended duration of expression and muscle specificity. Viral promoters, such as the cytomegalovirus (CMV) promoter, produce high levels of transgene expression, which last for only a few days at high levels. Moreover, many promoters lack muscle tissue specificity. A muscle-specific skeletal alpha-actin promoter (SkA) has shown tissue specificity but lower peak activity than that of the CMV promoter in vivo. It has been reported in vitro that serum response factor (SRF) can stimulate the transcriptional activity of some muscle-specific promoters. In this study, we show that co-expression of SRF in vivo is able to up-regulate SkA promoter-driven expression about 10-fold and **CMV /SkA chimeric promoter activity** by five-fold in both mouse gastrocnemius and tibialis muscle. In addition, co-expression of transactivator with the **CMV/SkA chimeric promoter** in muscle has produced significantly enhanced duration of expression compared with that shown by the **CMV promoter**-driven expression system. A dominant negative mutant of SRF, SRFpm, abrogated the enhancement to SkA **promoter activity**, confirming the specificity of the response. Since all the known muscle-specific promoters contain SRF binding sites, this strategy for enhanced expression may apply to other muscle-specific promoters in vivo.

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L6 ANSWER 1 OF 2 MEDLINE on STN
 ACCESSION NUMBER: 2005348663 IN-PROCESS
 DOCUMENT NUMBER: PubMed ID: 16000069
 TITLE: Diverse plasmid DNA vectors by directed molecular evolution of cytomegalovirus promoters.
 AUTHOR: **Wright Anne; Semyonov Andrey;** Dawes Glenn; Cramer Andreas; Lyons Rick; Stemmer Willem P C; Apt Doris; **Punnonen Juha**
 CORPORATE SOURCE: Maxygen, Redwood City, CA 94063, USA.
 CONTRACT NUMBER: R01 HL64548 (NHLBI)
 SOURCE: Human gene therapy, (2005 Jul) 16 (7) 881-92.
 Journal code: 9008950. ISSN: 1043-0342.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: NONMEDLINE; IN-PROCESS; NONINDEXED; Priority Journals
 ENTRY DATE: Entered STN: 20050708
 Last Updated on STN: 20050727

AB Genetic vaccinations, gene therapy, and manufacturing of therapeutic proteins would benefit from promoter sequences that provide improved or prolonged expression levels. The cytomegalovirus (**CMV**) **promoter** is one of the most potent promoters known to date, and no previous examples of improved activity of this promoter by sequence mutagenesis have been reported. This study describes directed molecular evolution of CMV promoters derived from two human and two nonhuman primate strains of CMV by DNA shuffling and screening. Libraries of **chimeric** promoters were screened and analyzed for expression levels and immune responses, using plasmid DNA vectors encoding luciferase and beta-galactosidase. The results indicate that high functional diversity among CMV promoters can be generated, and the **chimeric** promoters selected after two rounds of DNA shuffling and particularly designed screening assays provided approximately 2-fold increased luciferase reporter gene expression and anti-beta-galactoside antibody response in vivo when compared with wild-type promoters. Sequence analysis of the shuffled promoters identified several mutations potentially contributing to the observed enhanced or reduced promoter activities and identified a 42-nucleotide region that appears obsolete for the functioning of the **CMV promoter**. Taken together, these data demonstrate the feasibility of generating diverse promoter sequences by DNA shuffling and screening methods, and provide novel structure- function information about CMV promoters. DNA shuffling and screening technologies provide a new approach to promoter optimization and development of optimal expression vectors for genetic vaccinations, gene therapy, and protein expression.

L6 ANSWER 2 OF 2 MEDLINE on STN
 ACCESSION NUMBER: 2000435676 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 10933911
 TITLE: Human T lymphocyte genetic modification with naked DNA.
 AUTHOR: Jensen M C; Clarke P; Tan G; **Wright C;** Chung-Chang W; Clark T N; Zhang F; Slovak M L; Wu A M; Forman S J; Raubitschek A
 CORPORATE SOURCE: City of Hope National Medical Center and Beckman Research Institute, Duarte, California 91010-3000, USA..
 mjensen@coh.org
 CONTRACT NUMBER: CA 30206 (NCI)
 SOURCE: Molecular therapy : journal of the American Society of Gene Therapy, (2000 Jan) 1 (1) 49-55.
 Journal code: 100890581. ISSN: 1525-0016.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals; AIDS
 ENTRY MONTH: 200009
 ENTRY DATE: Entered STN: 20000928
 Last Updated on STN: 20000928

AB Endowing T lymphocytes with novel functional attributes by genetic modification is under development for a broad range of clinical cellular immunotherapy applications. To circumvent many of the limitations associated with viral vector systems, a plasmid-based electroporation system that reliably generates G418-resistant primary human T lymphocyte clones was developed. TCR alpha/beta+ CD4+CD8-, and CD4-CD8+ T lymphocyte clones can be routinely isolated from OKT3-stimulated peripheral blood mononuclear cells electroporated with linear plasmid DNA in a limiting dilution drug selection format. Fluorescence in situ hybridization (FISH) studies performed on T cell metaphase spreads using a probe specific for plasmid sequence demonstrated a single FISH signal doublet that varied in chromosomal location from clone to clone. Southern blot analysis using a Neo-specific probe verified chromosomal integration of plasmid vector at a single site. Band intensity quantitation of blots developed with a zeta-specific probe capable of annealing to both endogenous TCR-zeta and the introduced **chimeric** zeta sequence demonstrated that integrated plasmid was present at a single copy number. Expression levels of the CD20-specific **chimeric** immunoreceptor construct from a **CMV** immediate/early **promoter** present in the plasmid vector varied widely from clone to clone but remained stable during ex vivo expansion to cell numbers in excess of 10(10). This T lymphocyte genetic modification strategy is currently being piloted in a FDA-sanctioned adoptive therapy trial for recurrent lymphoma.

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